

## ARCHIVAL PRESERVATION KIT

### Cross-reference to Related Applications

5 [0001] This application claims priority from United States Provisional application no. 60/419,145 filed October 18, 2002.

### Technical Field

[0001] The invention relates to the field of archival preservation and more particularly to a kit for archival preservation.

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### Background

[0002] Museums and similar institutions have developed effective methods for preserving archival articles. However there are many instances where families wish to preserve commonly encountered articles in their homes which have sentimental value, such as wedding dresses, baby clothing, photographs etc. where proper archival techniques are necessary to avoid deterioration of the textile, paper etc. Currently products which are available to facilitate home archiving of such sentimental objects are not satisfactory in ensuring that proper archival techniques are followed. There is therefore a need for an archival preservation kit to assist individuals in the preservation of such articles.

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### Summary of Invention

[0003] The invention therefore provides a kit for preserving one or more archival articles, comprising: i) a box constructed of material suitable for preserving archival material; and ii) a flexible, opaque cover sized to removably enclose the box. The kit may include a number of other enclosures depending on the nature of the objects to be preserved, including flexible tissues suitable for wrapping archival articles, gloves for handling archival articles, moisture-absorbing lining material, a desiccant, and written instructions. The cover may be provided with a securable flap which is fastened in a closed configuration by flexible ties.

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### Brief Description of Drawings

35 [0004] In drawings which illustrate a preferred embodiment of the invention:

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- [0005] Fig. 1 is a perspective view of an assembled archival preservation kit according to a first embodiment of the invention, for preserving textiles;
- [0006] Fig. 2 is an exploded perspective view of the archival preservation kit shown in Fig. 1;
- [0007] Fig. 3 is a perspective view of an assembled archival preservation kit according to a second embodiment of the invention, for preserving miscellaneous keepsakes ;
- [0008] Fig. 4 is a perspective view of the box for the archival preservation kit shown in Fig. 3;
- [0009] Fig. 5 is a perspective view of an assembled archival preservation kit according to a third embodiment of the invention, for preserving documents;
- [0010] Fig. 6 is a perspective view of a box for the archival preservation kit shown in Fig. 5;
- [0011] Fig. 7 is a perspective view of an assembled archival preservation kit according to a fourth embodiment of the invention, for preserving large documents; and
- [0012] Fig. 8 is a perspective view of a box for the archival preservation kit shown in Fig. 7.

#### Description

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- [0013] Throughout the following description, specific details are set forth in order to provide a more thorough understanding of the invention. However, the invention may be practiced without these particulars. In other instances, well known elements have not been shown or described in detail to avoid unnecessarily obscuring the invention. Accordingly, the specification and drawings are to be regarded in an illustrative, rather than a restrictive, sense.
- [0014] With reference to Fig. 1, a bridal gown preservation kit is designated generally as 10. It is used to preserve large textile items such as bridal gowns or quilts. It is made from archival components to provide for the long-term storage of heirloom textiles. It includes a two-piece archival

Coroplast™ box 12, with an assembled measurement of preferably about 34" x 24" x 8". The archival Coroplast box 12, which is not sealed, provides water resistance and temperature consistency while allowing air circulation. Acid-free, lignin-free tissue 14, either buffered or unbuffered, is provided to wrap the textile and slow acid migration. Preferably about 50 sheets of buffered, acid-free tissue paper (if the textile is synthetic or cotton) or 50 sheets of unbuffered, acid-free tissue paper (if the textile is silk or wool) is provided. A cotton muslin cover 16 is provided over box 12 to prevent damaging dust and light exposure. Preferably cover 16 is made of unbleached muslin cotton, measuring about 34.5" x 24.5" x 8" with an 8" flap 18 and twill tape closure 20, to avoid any metal closures such as zippers, snaps etc. A pair of cotton gloves 22 is provided to permit the user to safely handle the item. A set of instructions 24 is also provided containing illustrated examples of how to prepare the textile item in question for preservation as well as guidelines for storage and future handling. Kit 10 may also optionally include a Tyvek™ textile box preservation liner 26 to be used in excessively humid climates, and re-usable desiccant 28 also for use in excessively humid climates.

**[0015]** Coroplast is a rigid, extruded twin-walled corrugated plastic sheet of co-polymer (90% polypropylene and 10% polyethylene). The material does not absorb water and the double corrugation helps trap moisture to make the material water resistant. Coroplast is heat and corrosion resistant, has a high Mullen Test bursting point, and is acid-free, contains no oils or dyes, and is chemically inert.

**[0016]** Coroplast provides excellent corrosion protection. Both ferrous materials and textiles corrode when they react with gases such as sulphuric acid and hydrochloric acid, which are gases which can exude from a chemically-cleaned bridal gowns and which naturally occur in textiles which come in contact with cardboard and non-archival plastic. Coroplast neutralizes off-gassing of the gown itself and protects ferrous snaps and closures on gowns and other textiles (such as costumes and religious vestments). Use of Coroplast therefore largely removes the need for an inert-atmosphere storage, which

means that normal household oxygen and gases will not affect the contents of the box.

5 [0017] Standard Coroplast is translucent so the Coroplast box 12 is used  
in conjunction with the acid-free tissue 14 (which wraps the textile) and the  
unbleached muslin cover 16 to limit light and dust exposure. In humid environ-  
ments a Tyvek™ preservation box liner 26 may be used to offer better moisture  
control as well as a desiccant 28 in order to monitor potentially dangerous  
10 humidity. Tyvek is a fibre-spun bonded Olefin™, a durable material of high-  
density polypropylene fibres. It is acid-free, does not tear, discolour, or mi-  
grate/create acid, and resists water, chemicals, rot and mildew. Most impor-  
tantly, it removes moisture away from the object it is protecting towards the  
surface environment, while at the same time preventing moisture from entering  
the chamber. A desiccant 28 of hydroabsorbent silica gel may also be used for  
15 preservation kits stored in humid climates, since excessive humidity encourages  
mould growth. The desiccant is preferably contained in an aluminum canister  
measuring about 4" x 2" x ½". The canister may contains an indicator which  
turns from blue to pink to signal high humidity and thus the need for reactiva-  
tion. To re-activate it, the canister is placed in a 325 degree F. oven for 3 hours  
20 or until blue and replaced in the preservation box.

[0018] The fact that the lid 13 and bottom 15 of box 12 are not sealed  
together allows air circulation which is necessary for maintaining a textile's  
stable state. The fact that the box is not sealed allows the customer to inspect  
25 the textiles periodically.

[0019] The kit 10 is assembled as follows. The box 12 is designed to  
snap together without the use of adhesives or tools. Two die-cut sheets of  
Coroplast are folded from their flat, die-cut state into a box lid 13 and box  
30 bottom 15 measuring 34" x 24" x 8" when lid and bottom are put together. The  
selected number of sheets of tissue paper 14 are counted and placed inside the  
box bottom. If the user has a gown or textile made from man-made fabric or  
cotton, buffered tissue is used. If the user has a gown made from silk, wool, or  
other animal-derivative textile, unbuffered tissue is used. If the user is unaware

of the content of their textile or if there is a mix of textiles to be stored in the box, unbuffered tissue is used. The pair of cotton gloves 22 is added to the tissue 14. The set of instructions 24 appropriate to the kit (ie: bridal or general textile) is placed inside box 12. If one or more of the optional components,

5 Tyvek preservation liner 26 or re-usable desiccant 28 are desired, then these are placed inside the box 12. The lid 13 of box 12 is then placed over the bottom 15 of the box 12. The muslin cover 16 is steam-pressed and placed over the box 12. Cover 16 may include monogramming 15 of initials or other identification

10 phrases describing the heirlooms preserved in the boxes. The front flap 18 is then secured by tying the two twill-tape ties 20 into a bow.

[0020] Where unbuffered tissue 14 is used, the tissue is pH neutral (pH 7.5) lightweight and flexible. It is produced without the addition of calcium

15 carbonate buffers which create a more alkaline tissue. Although it may prevent acid-migration better, alkalinity can be harmful to any textiles created from animal proteins, such as silk, leather and wool. This tissue is acid-free, lignin-free, lightly bleached, and preferably in sheets sized 20" x 30". Where buffered

20 tissue 14 is used, it has a minimum pH 8.5 and the addition of 3% calcium carbonate to slow acid migration by creating a more alkaline environment. It is recommended for paper documents, black-and-white prints and negatives, man-made fabrics, and cotton.

[0021] 100% cotton gloves 22 are preferred for handling textiles and

25 heirloom items which are being prepared for long-term storage, since oils, salts, and grime on hands can promote deterioration of textiles, paper, photographs, and negatives.

[0022] Variations on the foregoing kit 10 may be made where different

30 materials are to be preserved. Where the textile items are smaller than a wedding dress or quilt, then a smaller Coroplast box 12 is used, such as for simple wedding gowns, christening gowns, vintage textiles such as lace and doilies, and baby clothing items. The kit provides a neutral and chemically-inert environment in which a variety of media can be safely stored long-term.

[0023] In order to improve upon the ability of the textile preservation kits to both absorb damaging acidic residue and prevent migration of such acids to other items in the preservation chamber, a triple-washed unbleached cotton muslin liner (not shown) may be added. This liner fits into the bottom 15 of the preservation box 12 shown in Fig. 1, with the excess of the fabric hanging over the sides. Once the textile has been interleaved with the acid-free tissue, it is placed inside the box 12, on top of the liner. The liner's excess edges are then folded over the item.

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[0024] The fabric for the small textile kit is fabricated into, essentially, a 48" x 66" sheet with top and bottom serged, with care instructions and brand label added. The fabric for the large textile kit shown in Fig. 1 is fabricated into an identical product, measuring 48" x 88". Preparation of the liner, once it reaches the warehouse after sewing, is to be washed 3 times with a gentle cleanser to remove water-absorbing starch sizing, and rinsed 6 times to ensure all impurities are removed. The liners are then steam-pressed and incorporated into the kit.

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20 [0025] It may be that it is desired to preserve multiple types of material according to a theme such as wedding, baby, school or heritage. In that case the archival kit provides physical separation of the contents, so photos, paper, textiles, and printed materials as well as small objects can be thematically stored within the same box. The kit 30 (Fig. 3) is therefore composed of an archival box 32 and enclosures. The box in this case is preferably an archival fibreboard clamshell box 32, having a flip-top lid attached to the body of the box, the closed box measuring, for example 17" x 11" x 3". Archival fibreboard is sulphur free, with a minimum pH of 8.5 and 3% calcium carbonate buffer throughout the material. Preferably it has a grey outer liner and white inner liner which are lignin-free and conform to ANSI Standard 1T9.2. Mullen bursting strength is 240 lbs per square inch. Metal edges 34 are used instead of potentially harmful adhesives for joining the box. It is shipped from manufacturer fully assembled with edges connected by the metal joints.

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[0026] The following enclosures are provided in kit 30. A number (e.g. 2) of 8" x 11" transparent 3 mil polyethylene envelopes (not shown) are provided. Transparent inert archival polyethylene 8" x 11" envelopes (not shown) used for the long term storage of certificates, documents, photographs and other valuable items are provided and are typically 3 mm thick. Also provided are a number (e.g. 5) of 6" x 9" archival polypropylene envelopes (not shown). These high density, transparent 3 mm polyethylene envelopes are inert and thus appropriate for the storage of photos, small memorabilia, paper items, and small textiles. Also provided are a number (e.g. 5) of 5" x 7" buffered acid-free envelopes (not shown). Acid-free, lignin-free envelopes which have a pH of 8.5 have had a 3% calcium carbonate buffer added to slow acid migration. The seams are sealed with a pH neutral adhesive. The envelopes provide safe storage for small documents, pamphlets, newspaper clippings as well as black-and-white prints. They pass the P.A.T (Photograph Activity Test) which is a standardized assessment which gauges how well an archival product will preserve photographic emulsions and papers. These envelopes are used to store everything from paper items to small memorabilia, such as ribbons, medals, and dried flowers. Also provided are a number of (e.g. 5) 6" x 9" polyethylene ziplock bags (not shown), a number of (e.g. 3) 2" x 3" polyethylene ziplock bags (not shown), and a number of (e.g. 3) sheets of 8 1/2" x 11" buffered acid-free interleaving paper (not shown). The archival standard for bond paper, used for interleaving documents as well as for writing or laser printing documents destined for permanent preservation, is Permalife Bond. It is a 20 lb water-marked white paper with a 4.5% calcium reserve and has a pH of 8.5. A number of (e.g. 2) sheets unbuffered acid-free tissue 14, a pair cotton gloves 22 and a set of instructions 24 are also provided. The only variation of the kit when it is used for wedding, baby, school or heritage purposes is the content of the instructions. The instructions provide guidance about types of materials to be stored inside the specific enclosures, ideas for organization and material selection, and guidelines for storage and future handling. A cotton muslin cover 36 is again provided over box 32 to prevent damaging dust and light exposure, with flap 38 and twill tape closure 40.

[0027] To assemble this variation of the invention 30, the box 32 is shipped from the manufacturer fully -assembled, the box is laid open, the kit contents are counted and added to the box, the instructions are selected depending on the type of kit ordered, the cotton muslin cover is steam-pressed and fitted over the box. If the customer has ordered monogramming 35, then this has been done prior to the final preparation of the kit. The front flap 38 is secured by tying the two twill-tape ties 40 into a bow.

[0028] Where the purpose of the kit is purely document preservation, a variation of the invention 50 (Fig. 5) which is for document preservation may be used. This kit 50 allows for the organization and safe preservation of document-style items, such as correspondence, certificates, booklets, notebooks, children's school work, and so forth. The archival elements promote a chemically neutral environment while the addition of calcium carbonate buffers in filing material prevents acid migration from item to item. For this kit a legal sized, acid-free metal edge flip-top document box 52 measuring 15" x 10" x 5" is used, with an unbleached cotton muslin cover 56, a 6" flap 58 and two twill tape ties 60 are used. By way of enclosures, 10 acid-free buffered legal file folders (not shown) are provided. These file folders are included for the safe storage of documents, correspondence, notebooks, and small works of art on paper. The folders are made from 10pt acid-free, lignin-free stock which has a pH of 8.5 and a 3% calcium carbonate buffer to slow acid deterioration. Also enclosed are 5 - 6" x 8" archival polypropylene envelopes (not shown), 5 acid-free buffered acid-free envelopes (not shown), 2 - 8" x 11" archival polyethylene envelopes, 20 pieces of buffered acid-free interleaving paper (not shown), 1 pair of cotton gloves 22 and a set of instructions 24. When the kit 50 is designed as a school material archival kit, the instructions 24 include tips for selecting and storing children's school work as well as guidelines for storage and future handling. When the kit is sold as a document preservation kit the instructions 24 discuss appropriate enclosures for various types of documents and records as well as guidelines for storage and future handling.

[0029] Where the purpose of the kit is artwork preservation, a further variation of the invention 70 (Fig. 7) which is for artwork preservation may be



used. In this case, the kit 70 is used for the long-term storage of oversized photographs, works of art on paper, newspapers, and other materials which requires flat storage in a neutral environment. The kit 70 is comprised of a large flat archival fibreboard box 72 as well as components which are customized to the particular materials. A muslin cover 76 protects the kit from light and dust. Instructions 24 are customized to the requirements of the three different media the kit protects: photographs, works of art on paper, and newspapers. A 2 piece acid-free buffered archival fibreboard drop front box measuring 24 ½" x 20 ½" x 3" is used. It has the same features of archival fibreboard described above, but the box is two-piece with top 73 and bottom 75, preferably measuring 24 ½" x 20 ½" x 3 ½" and has a drop front 71 on the bottom portion so that fragile items can be placed inside and removed without curving. It has an unbleached cotton muslin cover 76 with flap 78 and closure ties 80 and the following enclosures: a pair of cotton gloves 22, 30 sheets of buffered or unbuffered acid-free interleaving tissue measuring 20" x 30" (buffered when used for newspapers) (not shown), or 20 archival polypropylene newspaper bags measuring 11" x 17" (not shown), and instructions 24 outlining selection and care of items based on customer's order as well as guidelines for storage and future handling. Inert polyethylene newspaper preservation bags measure 14" x 19" and are made from 2 mm polyethylene which will not off-gas and cause further damage to the newspaper. Such bags prevent acid migration from one paper (or portion) to another. To assemble this kit 70, the box 72 is shipped from the manufacturer fully-assembled, the box lid 73 is removed, and kit contents are counted and added to the box, including instructions 24 which are selected depending on the type of kit. The cotton muslin cover 76 is steam-pressed and fitted over the box 72. If monogramming 77 is desired, then this has been done prior to the final preparation of the kit. The front flap 78 is secured by tying the two twill-tape ties 80 into a bow.

30 [0030] As will be apparent to those skilled in the art in the light of the foregoing disclosure, many alterations and modifications are possible in the practice of this invention without departing from the spirit or scope thereof. Accordingly, the scope of the invention is to be construed in accordance with the substance defined by the following claims.